

Remarks

The present application is a continuation-in-part of copending application serial No. 10/411,936. The parent application provides a kit which a mobile home user can use to protect the water pipes under the home. The subject application provides a kit that includes the items claimed in the parent application to construct a protective plenum about the pipes plus items that can be used to construct a protective plenum about the water box. The water pipes and the water box are part of the water system for the home.

The kit is supplied in compact form because both protective plenums can be provided in flattened form. The kit requires little shelf space which is attractive to merchandisers like Walmart and other "big boxes."

In the Office action, applicant's claims 1, 2, 7, 9-15, 17 and 19 were rejected under 35 U.S.C. 102(b) as being anticipated by Powell et al. In response to this action, applicant has amended the claims to features not found in the reference - namely, the attachment of the protective plenum about the water box to the inflatable protective plenum about the pipes claimed in the parent application.

The Powell et al. Patent

Powell et al. discloses a conduit system surrounding an exterior water pipe under a mobile home wherein one end of the conduit communicates with the

forced hot air furnace and the other end communicates with the furnace cold air return (see lines 8-16 in column 2). Powell et al. shows the water supply pipe above ground and located within a pit. When the water supply pipe is above ground, a cross-shaped member 54 formed of styrofoam provides a protective plenum. When the water supply pipe is located in a pit, an insulated cover 100 caps the pit forming a protective plenum. Powell et al.'s protective plenum about the water box is flowably connected to the protective plenum about the water pipes. It is at this point that applicant's kit differs from what is shown in the Powell et al. patent.

The pipe under the mobile home in Powell et al.'s patent is protected with cylindrical styrofoam sections (78) that are maintained in abutted end-to-end and air sealed relationship with collars (80) (see lines 46-58 in column 4).

Powell et al.'s objective is to form a closed system including both the protective plenum about the water box and the protective plenum about the water pipes which is thought desirable because it minimizes heat loss: "As the only loss of heat occurring from the recycling air as it passes through the conduit system 52 is that lost through the walls of the styrofoam member, or into the water pipe, the heat loss is low..." (lines 19-23 in column 5). This goal, however, is accomplished in applicant's opinion at unacceptably high cost.

Powell et al.'s styrofoam sections out of which the protective plenum about the pipes are formed are more expensive per running foot than applicant's thin, flexible tubing. Shipping costs and store display space also overwhelmingly favor applicant's kit over Powell's system.

There is no motivation to redesign Powell et al. in the direction taken by applicant inasmuch as Powell et al.'s objective is to have a closed system. Applicant's system is open. Based on field tests, the amount of heat lost with applicant's system is negligible. Heat lost along the pipes is primarily leaked into the crawl space under the mobile home where it may provide some warming effect to the floor.

Applicant's claims 3-6, 8, 16 and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Powell et al. in view of U.S. patent No. 5,158,114 to Botsolas. Botsolas discloses "adhesive tape" for taping his clamshell pipe cover together but he does not disclose an inflatable protective plenum for the pipes.

The Botsolas Patent


Botsolas discloses a clamshell pipe cover for use with Y-shaped joints. The cover is formed of two sections which are then taped together. The sections are formed of material capable of maintaining a pre-formed shape as opposed to applicant's kit which makes use of thin, flexible tubing to form a protective plenum

about the pipes which takes shaped when it is inflated (see lines 49 in column 4 through line 2 in column 5 of Botsolas).

Application of Botsolas' teaching of adhesive tape to Powell et al.'s disclosure of a closed conduit system formed of styrofoam sections does not result in the subject matter of applicant's claims. Applicant's claims require that the kit include thin, flexible tubing for use in constructing a protective plenum for the pipes. The claims also require rigid joining members and fasteners for joining the adjacent sections of the thin, flexible tubing to the rigid joining elements in a manner that there is air leakage thus obviating the need for a cold air return. Air leakage is essential in applicant's system as otherwise static pressure would build up in the plenum about the pipes, no new hot air would be introduced and the plenum would cool.

Because all the elements required for applicant's kits are not shown in either Powell et al. or Botsolas, it is believed that the claims are patentable. Reconsideration of the application and allowance of the claims are respectfully requested.


Respectfully submitted,


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CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted
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